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| APPLICATION NO.                      | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/036,561                           | 12/31/2001  | Shih-An Cheng        | INMEP0103US         | 4650             |
| 43076                                | 7590        | 10/18/2005           | EXAMINER            |                  |
| MARK D. SARALINO (GENERAL)           |             |                      | PARK, JUNG H        |                  |
| RENNER, OTTO, BOISSELLE & SKLAR, LLP |             |                      | ART UNIT            |                  |
| 1621 EUCLID AVENUE, NINETEENTH FLOOR |             |                      | PAPER NUMBER        |                  |
| CLEVELAND, OH 44115-2191             |             |                      | 2661                |                  |

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/036,561 | <b>Applicant(s)</b><br>CHENG ET AL. |  |
|                              | <b>Examiner</b><br>Jung Park         | <b>Art Unit</b><br>2661             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1-6 & 8-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 9-15, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma et al. (U.S. 6,795,867, "Ma") in view of Faccin et al. (US Pub. 2001/0049790, "Faccin").

Regarding claim 1, Ma discloses, "a Voice-over-Internet Protocol (VoIP) system, comprising: a network including at least two VoIP proxy servers (108 & 109 in figure 1; col. 3, lines 57-59) configured to shift workload automatically (LMU 108 & 109 in figure 1, col. 4, lines 33-35) and to allow voice data (col. 4, lines 54-56 where voice communications) to be transmitted and received over the network (102 in figure 1); and at least one VoIP client (112, 114, 116 & 118 in figure 1) operatively coupled to the network to transmit and receive voice data over the network."

Ma teaches the VoIP system comprising gatekeepers and Gateways for providing IP telephony service to a plurality of endpoints. The gatekeepers are used for load balancing in the network, but Ma is silent on whether the gatekeepers function same as VoIP proxy servers or not.

However, Faccin teaches that it is old and well known in the network art with the proxy server using SIP protocol or gatekeeper being in accordance with the H.323 specification (col. 3, para. 0026, lines 28-31). The gatekeepers used for load balancing in the system of Ma meet the claim limitation, "VoIP proxy server" in this claim.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use the gatekeeper for H.323 protocol in system of Ma instead of VoIP proxy server for SIP protocol as taught by Faccin. The motivation is to use suitable equipment according to different VoIP protocols in order to follow the convention or standard for communication over the VoIP network.

Regarding claim 2, Ma discloses, "the at least one VoIP client connects to the first one of the at least two VoIP proxy servers determined to have a lower workload based on a predefined threshold (*loading limitation 512 in figure 5; col. 9, line 28*) in order to transmit and receive voice data."

Regarding claim 13, Ma discloses, "a method for balancing workload on a Voice-over-Internet Protocol (VoIP) system including at least one VoIP client coupled to a network including at least two VoIP proxy servers configured to shift workload automatically, comprising the steps of:

- (a) transmitting a client request (*col. 5, line 63*) to connect to one of the at least two VoIP proxy servers (*108 & 109 in figure 1*);
- (b) connecting to the first one of the at least two VoIP proxy servers (*col. 6, lines 4-5*) determined to have a lower workload (*col. 8, lines 55-56*) based on a predefined threshold (*col. 9, line 28 where load limitation*) in order to transmit and receive voice data (*col. 4, lines 54-56 where voice communications*).

Regarding claims 3 and 14, Ma discloses, "the VoIP system according to claim 1 and 13, wherein one of the at least two VoIP proxy servers is a primary VoIP proxy server (*assigned*

*gatekeeper 402 in figure 4) configured to shift workload automatically to the first one of the at least two VoIP proxy servers determined to have a lower workload based on a predefined priority relationship between the at least two VoIP proxy servers (408 in figure 4 where between assigned gatekeeper and serving gatekeeper)."*

Regarding claims 4, 15, and 19, "the primary VoIP proxy server provides the identity (*selecting message 406 in figure 4; col. 8, lines 52-53*) of the one of the at least two VoIP proxy servers with the workload below the predefined threshold to the at least one of VoIP client in response to a client request (*setup message 402 in figure 4; col. 8, lines 46-49*) to connect from the at least one VoIP client."

Regarding claim 9, Ma discloses, "the network is composed of one or more networks selected from a proprietary network, a network of leased facilities, the Internet, an Intranet, a wide-area network (WAN), a local-area network (LAN), a virtual private network (VPN) (*124 & 102 in figure 1; col. 4, lines 5-8 where IP network is well known in the art to include the Internet and Intranets*)."

Regarding claim 10, Ma discloses, "the at least one VoIP client coupled to a gateway coupled to the network, wherein the gateway controls access to the network (*104 & 106 in figure 1; col. 3, lines 63-64*)."

Regarding claim 11, Ma discloses, "the gateway comprises one or more of a VoIP gateway, a VoIP PTSN gateway (*230 in figure 2*), a media gateway (*col. 5, lines 10-13 where*

*H.320 and H.324 are protocols for video links, which are media), a router (212 in figure 2) and an H.323 gateway (col. 5, line 21)."*

Regarding claim 12, Ma discloses, "the at least one VoIP client comprises one or more of an IP phone, a plain old telephone system (POTS) phone, a cell phone, a satellite phone, a microphone, a computer video camera with a microphone (*col. 4, lines 55-56 where endpoints provide voice communications*) and, a multi-media computer (*col. 6, lines 55-57 where endpoints with multimedia capability*) configured to transmit and receive voice data."

Regarding claim 18, Ma discloses, "the method further including the step of; (f) transmitting and receiving voice and video data (*col. 6, lines 55-57 where endpoints provide multimedia data*)."

3. Claims 5, 6, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma in view of Faccin and further in view of Brendel (U.S. Pub. 2005/0010754, "Brendel").

Regarding claims 5 and 16, Ma discloses the primary VoIP proxy server forwarding the client request (*redirect 410 in figure 4*) to connect to a next one of the at least two VoIP proxy servers, except if the connection is in accordance with a predefined sequence. However, Brendel discloses some load balancing methods assigning client request to servers randomly or in a predefined sequence (*col. 1, para. 0010, lines 1-2*).

Therefore, at the time of the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use one of the available methods for forwarding the client request to connect to a next one of the VoIP proxy servers. The motivation of applying the predefined sequence is to simplify the server finding procedure based on the

sequence. For example, a round robin method is continuously repeating sequence for simplifying the procedure, such as the polling of a series of servers, one after the other.

Regarding claim 6, Ma and Faccin lacks what Brendel discloses, "one of the at least two VoIP proxy servers continues to forward the client request to connect to the next one of the at least two VoIP proxy servers in the predefined sequence continues until the client request is received by another one of the at least two VoIP proxy servers (*col. 1, para. 0010, lines 1-2*) in the predefined sequence whose workload is determined to be below the predefined threshold and the at least one VoIP client connects to the another one of the at least two VoIP proxy servers whose workload is below the predefined threshold in order to transmit and receive voice data."

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to add the method of finding the next available load-balancing server in Brendel to the method of load balancing as taught by Ma and Faccin. The motivation of applying the repeat method is to simplify the server finding procedure based on the predefined sequence. For example, a round robin method is continuously repeating sequence, such as the polling of a series of servers, one after the other.

4. Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma and Faccin in view of Brendel and further in view of Okano et al. (U.S. 6,725,253, "Okano").

Regarding claims 8 and 17, Ma, Faccin and Brendel lacks what Okano discloses, "wherein when a last one of the at least two VoIP proxy servers in the predefined sequence has a workload above the predefined threshold, the last one of the at least two VoIP proxy servers responds to the forwarded request to connect with a message to the primary VoIP proxy server

that all VoIP proxy servers are above the predefined threshold and therefore are unable to handle the call; and wherein the primary VoIP proxy server responds to the client request to connect with a message indicating all the VoIP proxy servers are busy and are unable to handle a call at this time (*col. 18, lines 60-61 where the cancel message is sent to the client when the servers can not provide the load balancing function*)."

It would have been obvious to one of ordinary skill in the art at the time of invention was made to apply the cancellation message feature in Okano to the VoIP system disclosed by Ma, Faccin and Brendel since one would be motivated to include the cancel message for the load balancing system in order to know the time-out of the system. Otherwise, the system's response takes too long if it has to wait for a response from all proxy servers, especially if the number of proxy servers is large or one or more of the servers fail.

#### ***Allowable Subject Matter***

5. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung Park whose telephone number is 571-272-8565. The examiner can normally be reached on Mon-Fri during 7:10-4:40.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

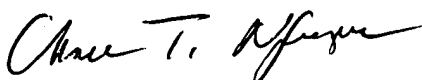


Art Unit: 2661

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JP

Jung Park  
Patent Examiner  
Art Unit 2661  
October 14, 2005



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